Database Management: Normalization Exercise Suite

The ***Emergency Service & Product*** (ESP) Company is a very small parts and service company. It currently uses a crude paper based system (3 by 5 cards, paper journal, etc) to keep track of its customers, inventory, suppliers, payments and invoices.

The company is growing rapidly and has found that it is unable to keep pace with the volume of data it must record about its business activities. It has decided that it wishes to automate some portions of its business.

You have been hired to assist the company in analyzing its business activities and to design a set of relational tables that they can use to develop a database system.

The company will provide you with copies of all their paper based forms (invoices, orders, batch records, etc). You will use these over several weeks to analyze the various forms and produce **third normal form (3NF)** relational **entity relationship diagrams (ERD)** for each **view** of their data. As a last step in the process, you will **merge** all the views to produce **one integrated ERD** and **fully detailed relational entities.**

Payments to Suppliers for Purchase Orders

ESP pays the full amount of each purchase order when it is due. ESP may pay for more than one purchase order with one cheque if they are all from the same supplier. The cheque is always written for the full and correct amount of all the purchase orders being paid for. ESP keeps a register of its cheques that looks as follows:

Cheque Register

Date	Cheque #	Cheque Amount	Supplier #	Supplier Name	Purchase Order #(s)	P.O. Date(s)
Jan 11/99	245	$823.18	7	Nuts & Bolts	79	Dec 23/98
					81	Dec 29/98
Jan 18/99	246	$427.39	15	Home Hardware	82	Dec 31/98

Each cheque number is unique and numbers are never used over again.

You are to take the information about the Cheque Register, provided above, and prepare a set of **3NF** relational entities and produce a relational **3NF ERD.**